# SAF-RC-001 Industrial Hygiene Sampling FINAL DATA

#### NO DISTRIBUTION REQUIRED

#### **COMMENTS:**

SDG <u>06I-0617-01</u> SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete

Partial

300 Area 303M Bldg







#### Cover Page

Report Identification Number:

06I-0617-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / R303MO J451

Payroll#: 73338

1891077770188702 197878787878

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Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
09 Feb 2006	J114L7	06104902	NMAM 7300M	G061F012	MCE
09 Feb 2006	J114L8	06104903	NMAM 7300M	G061F012	MCE
09 Feb 2006	J114L9	06104904	NMAM 7300M	G061F012	MCE
09 Feb 2006	J114M0	06I04905	NMAM 7300M	G061F012	MCE
09 Feb 2006	J114P8	06104906	NMAM 7300M	G061F012	MCE

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Phone: (801) 266-7700

FAX: (801) 268-9992

Name: Joanna C. Sanchez

Title: Chemist

Date: February 15, 2006





### Case Narrative Page

Report Identification Number: 06I-0617-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

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General Set Information: There are 3 samples in set 06I-0561-01, 6 samples in set 05I-0563-01 and 5 samples in set 06I-0617-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

**<u>Holding Times:</u>** The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.02 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.08 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 1. ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

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### Case Narrative Page

Laboratory Control Sample and Duplicate Analysis: Two Laboratory Control Samples (LCSs) and two Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

Replicate Analysis: Two samples were replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples ( $\mu g/sample$ ) = (A) x (B) x (C) Where:

A = Analyte concentration from instrument determination ( $\mu g/L$ )

B = Concentration factor from sample preparation

= Final Volume of Digestate (L)

Sample

C = Dilution performed at time of analysis

Example Calculation:  $(1 \mu g/L) \times (0.025 L/sample) \times (1) = 0.025 \mu g/sample$ 

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Miscellaneous Comments: None.





## Report Page

Report Identification Number: 06I-0617-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / R303MO J451

Payroll#: 73338

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Berylliun µg/sampl		Berylliun µg/m³	n.	Air Volume L
J114L7	06I04902	14 Feb 2006	< 0.02	U	**	[ ]	**
J114L8	06I04903	14 Feb 2006	< 0.02	U	**		**
J114L9	06104904	14 Feb 2006	<0.02	U	< 0.066	U	305.
J114M0	06104905	14 Feb 2006	< 0.02	Ū	< 0.071	U	283.
J114P8	06104906	14 Feb 2006	< 0.02	U	< 0.068	U	296.
	Limit of I	Detection (LOD)	0.	02			
R	equired Detecti	on Limit (RDL)					

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead µg/sampl	e	Lead μg/m³		Cadmiun µg/sample	
J114L7	06104902	14 Feb 2006	<1.	U	**		<0.08	U
J114L8	06I04903	14 Feb 2006	<1.	Ü	**		<0.08	Ū
J114L9	06104904	14 Feb 2006	<1.	U	<3.3	Ü	< 0.08	U
J114M0	06104905	14 Feb 2006	<1.	U	<3.5	U	<0.08	Ū
J114P8	06104906	14 Feb 2006	<1.	U	<3.4	U	< 0.08	U
	Limit of I	Detection (LOD)		1.			0.	.08
R	equired Detecti	on Limit (RDL)						

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Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmiun μg/m³	a
J114L7	06104902	14 Feb 2006	**	
J114L8	06104903	14 Feb 2006	**	
J114L9	06104904	14 Feb 2006	< 0.26	U
J114M0	06104905	14 Feb 2006	<0.28	U
J114P8	06104906	14 Feb 2006	< 0.27	Ū
	Limit of I	Detection (LOD)		
R	equired Detect	ion Limit (RDL)		





## Report Page

U - Parameter not detected above LOD. J - Parameter between LOD and RDL.

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## QC Summary Page

Report Identification Number: 06I-0617-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby

Laboratory Identification Number: DCHM

SAF: RC-001 / R303MO J451

Payroll#: 73338

Batch ID: G061F012

,	QC				Parent		Percent	Relative Percent
QC Sample ID	Type	Analyte	Units	Result	Result	Target	Rec.	Diff.
BL-241304-1	MB	Beryllium	μg/sample	ND	NA	NA	NA	NA
BL-241304-1	MB	Lead	μg/sample	ND	NA	NA	NA	NA
BL-241304-1	MB	Cadmium	μg/sample	ND	NA	NA	NA	NA
QC-241304-1	LCS	Beryllium	μg/sample	11.0	NA	10.0	110.	NA
QC-241304-1	LCS	Lead	μg/sample	106.	NA	100.	106.	NA
QC-241304-1	LC\$	Cadmium	μg/sample	33.2	NA	30.0	111.	NA
QD-241304-1	LCSD	Beryllium	μg/sample	10.7	11.0	10.0	107.	2.84
QD-241304-1	LCSD	Lead	μg/sample	104.	106.	100.	104.	1.26
QD-241304-1	LCSD	Cadmium	μg/sample	32.3	33.2	30.0	108.	2.58

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) \* 100.0

MS, MSD Percent Rec. = ((Result - Parent) / Target) \* 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS - LCSD|) / ((LCS + LCSD)/2.0)) \* 100.

MS, MSD Relative Percent Diff. = ((|MS - MSD|) / ((MS + MSD)/2.0)) \* 100.

LD Relative Percent Diff. = ((|Parent - LD|) / ((Parent + LD)/2.0)) \* 100

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# COC Page

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Payroll #:		Sampling Location	Sampling Location		SUCTIONS S mest be pro-	19	32	SAF Na. RC-001			24 14		
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## **COC** Page

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WCH-SH-202 (08/24/2005)